

Remarks

Claims 1-26, 35, 36, 45-48, and 50-89 are pending in the application. Claims 6-19, 35, 36, 45-48, 50-69, 77, and 79-89 were withdrawn from consideration as being drawn to a non-elected invention. Claims 20/7, 20/12, 20/17, 21-26, were withdrawn as being directed to a non-elected species, there being no allowable generic or linking claim at the time of the rejection. Claims 1-5, 20/2, 70-76, and 78, are the elected invention and elected species, and were the subject of the office action. Claims 4, 6-19, 27-69, 77, 79-80, and 82-89 have been canceled. Claims 1, 2, 5, and 20 have been amended. Claims 90-91 have been added. No new matter has been added by virtue of this amendment. Reconsideration of the application as amended is requested.

Priority

Applicant has amended the specification to claim priority of the parent case which depends from the earlier filed provisional application.

IDS

Applicant will shortly be submitting an IDS and a fee for the IDS including two US patents cited by the examiner in the Canadian counterpart application. The two US patents are 3,602,570 and 3,712,813.

Specification

In addition to claiming priority of the parent case, the specification has also been amended to replace the abstract with a new abstract as required by the Examiner.

Claim Objections

The Examiner objects to claims 4, 2, and 78. Claim 4 has been canceled and new claim 90 added. Claims 2 and 78 have been amended to fix the problems identified by the Examiner.

Claim Rejections--35 U.S.C. § 112, second paragraph

The Examiner rejects claim 20/2 under 35 U.S.C. § 112, second paragraph. Claim

20/2 has been amended to fix the problem identified by the Examiner.

Claim Rejections—35 U.S.C. § 102

The Examiner rejects claims 1, 2, 5, 70, 71, 72, 74, and 75 under 35 U.S.C. § 102(b), as being anticipated by Kojima (US Patent 4,312,559).

Element (b) of claim 1, as amended, provides:

- b) providing a non-opaque object mask having substantially planar regions capable of transmitting a portion of said illumination beam as undiffracted reference wavefronts, and having one or more substantially transparent elements for creating overlapping object wavefronts when said illumination beam is incident thereon.

Element (e) of claim 1, as amended, provides:

- e) illuminating said object mask with said illumination beam, wherein said illumination beam directed along said axis causes said object mask to allow undiffracted reference wavefronts to pass therethrough, and wherein said illumination beam directed along said axis causes said one or more substantially transparent elements to create object wavefronts which interact with said undiffracted reference wavefronts to create an interference pattern.

Kojima provides reference beam B' illuminating off axis holographic lens HR2 from the side, not along the axis. Kojima does not teach or suggest "a non-opaque object mask having substantially planar regions capable of transmitting a portion of said illumination beam as undiffracted reference wavefronts," as provided in element (c) of claim 1. Nor is there teaching or suggestion in Kojima of illuminating on axis to provide reference wavefronts.

Nor does Kojima teach or suggest an "illumination beam directed along said axis causes said object mask to allow undiffracted reference wavefronts to pass therethrough," as provided in element (e) of claim 1. There is no teaching or suggestion in Kojima of illuminating on axis to provide reference wavefronts. Thus, the rejection of claim 1, and claims dependent thereon, under 35 U.S.C. § 102(b), as being anticipated by Kojima has been traversed.

The Examiner rejects claims 1, 2, and 5, under 35 U.S.C. § 102(b), as being anticipated by Lungershausen (US Patent 5,258,863).

Element (b) of claim 1, as amended, provides:

b) providing a non-opaque object mask having substantially planar regions capable of transmitting a portion of said illumination beam as undiffracted reference wavefronts, and having one or more substantially transparent elements for creating overlapping object wavefronts when said illumination beam is incident thereon.

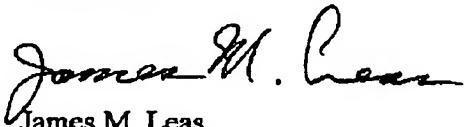
Lungershausen uses lenses—non-planar elements—for providing the reference wavefronts. Lungershausen does not teach or suggest using substantially planar regions for providing his reference wavefronts. Thus, the rejection of claim 1, and claims dependent thereon, under 35 U.S.C. § 102(b), as being anticipated by Lungershausen has been traversed.

Prior Art Made of Record

Applicant has reviewed the prior art made of record and not relied upon and believes it is no more relevant than that relied upon.

It is believed that the claims are in condition for allowance. Therefore, applicant respectfully requests favorable reconsideration. If there are any questions please call applicant's attorney at 802 864-1575.

Respectfully submitted,
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